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# Quality of Care and Outcomes Assessment

## MORTALITY AND OUTCOMES OF PATIENTS PRESENTING WITH AND WITHOUT IATROGENIC AORTIC DISSECTIONS

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**Background:** Cardiovascular procedures have become more frequent over the last few decades. A rare yet serious complication is iatrogenic aortic dissection (iAD). The purpose of this study was to compare management and outcomes of type A (TA) and type B (TB) iatrogenic and spontaneous dissection (sAD) patients (pts).

**Methods:** 3104 pts from the International Registry of Acute Aortic Dissection (1996 to 2011) were divided into groups of either iAD (n=100) or sAD (n=3004). The iAD cohort consisted of 70 TA and 26 TB patients.

**Results:** There were significant differences in history and presentation between iAD and sAD pts when stratified by dissection type (see table). Complication rates for TA iAD pts were higher than for sAD pts pre-operatively for myocardial ischemia (27.9% v. 8.8%, p<0.001) and myocardial infarction (16.7% v. 4.3%, p<0.001). sAD patients were managed similarly to iAD with respect to medical, surgical or endovascular therapy, with similar mortality between treatment groups. In contrast, postoperative rates of stroke (17.2% v. 9.5%, p=0.053) or limb ischemia (9.5% v. 3.5%, p=0.013) were significantly higher after iAD than sAD.

**Conclusion:** Pts presenting with iAD are typically older and less likely to present with pain than those with sAD. Although mortality rates do not appear to be affected, postoperative morbidity appears higher in iAD. As the frequency of cardiovascular procedures increase, clinicians need to be aware of the signs and symptoms of iAD and its associated negative outcomes.

Variable	Type A			Type B		
	iAD	sAD	p-value	iAD	sAD	p-value
<b>Demographics/History</b>						
Mean age (years)	69.7 ± 14.5	61.5 ± 14.5	<0.001	68.1 ± 8.2	63.3 ± 14.2	0.005
Diabetes	9/69 (13.0%)	109/1871 (5.8%)	0.014	1/24 (4.2%)	83/1063 (7.8%)	1.000
Known aortic aneurysm	16/70 (22.9%)	233/1875 (12.4%)	0.010	9/27 (33.3%)	220/1067 (20.6%)	0.109
Known atherosclerosis	52/69 (75.4%)	388/1866 (20.8%)	<0.001	21/27 (77.8%)	325/1057 (30.7%)	<0.001
Prior CABG	14/68 (20.6%)	83/1879 (4.4%)	<0.001	6/24 (25.0%)	46/1047 (4.4%)	<0.001
Prior cath/angiography	39/52 (75.0%)	144/1590 (9.1%)	<0.001	15/20 (75.0%)	88/881 (10.0%)	<0.001
Prior PTCA	13/51 (25.5%)	33/1580 (2.1%)	<0.001	7/20 (35.0%)	26/878 (3.0%)	<0.001
<b>Presenting Symptoms</b>						
Painless presentation	17/48 (35.4%)	122/1884 (6.5%)	<0.001	7/19 (36.8%)	30/1071 (2.8%)	<0.001
Abrupt onset of pain	21/41 (51.2%)	1492/1799 (82.9%)	<0.001	7/15 (46.7%)	898/1038 (86.5%)	<0.001
Anterior chest pain	23/37 (62.2%)	1227/1535 (79.9%)	0.008	7/16 (43.8%)	526/829 (63.4%)	0.016
Posterior chest pain	6/30 (20.0%)	551/1409 (39.1%)	0.034	1/15 (6.7%)	420/789 (53.2%)	<0.001
Migrating pain	1/43 (2.3%)	232/1739 (33.3%)	0.036	1/15 (6.7%)	174/1007 (17.3%)	0.489
Radiating pain	6/43 (14.0%)	650/1757 (37.0%)	0.002	5/15 (33.3%)	432/1016 (42.5%)	0.602
A1 Murmur	5/45 (11.1%)	622/1634 (38.1%)	<0.001	2/23 (8.7%)	102/1012 (10.1%)	1.000